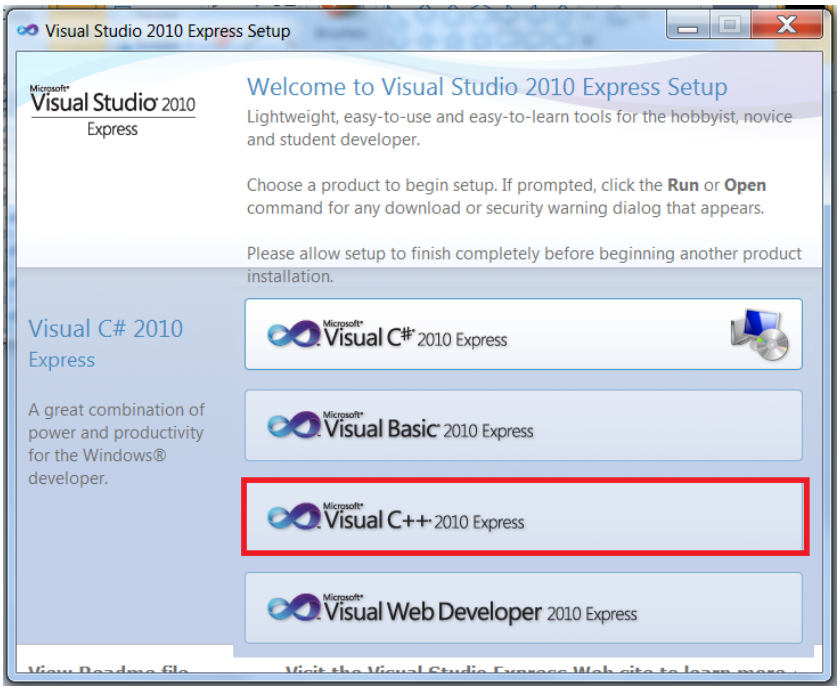
Steps to Install CPLEX 64-bit on 64-bit OS

- Vikranth

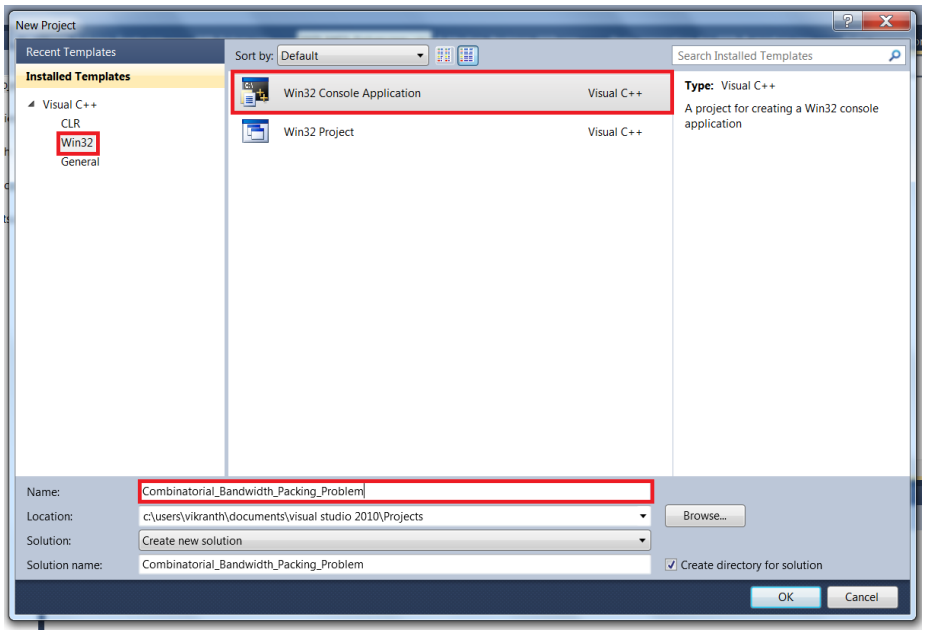
1. Install Visual C++
    a. Run **Setup.exe** from **VS2010Express1** folder
    b. Click on **Microsoft Visual C++ 2010 Express** option and install the application



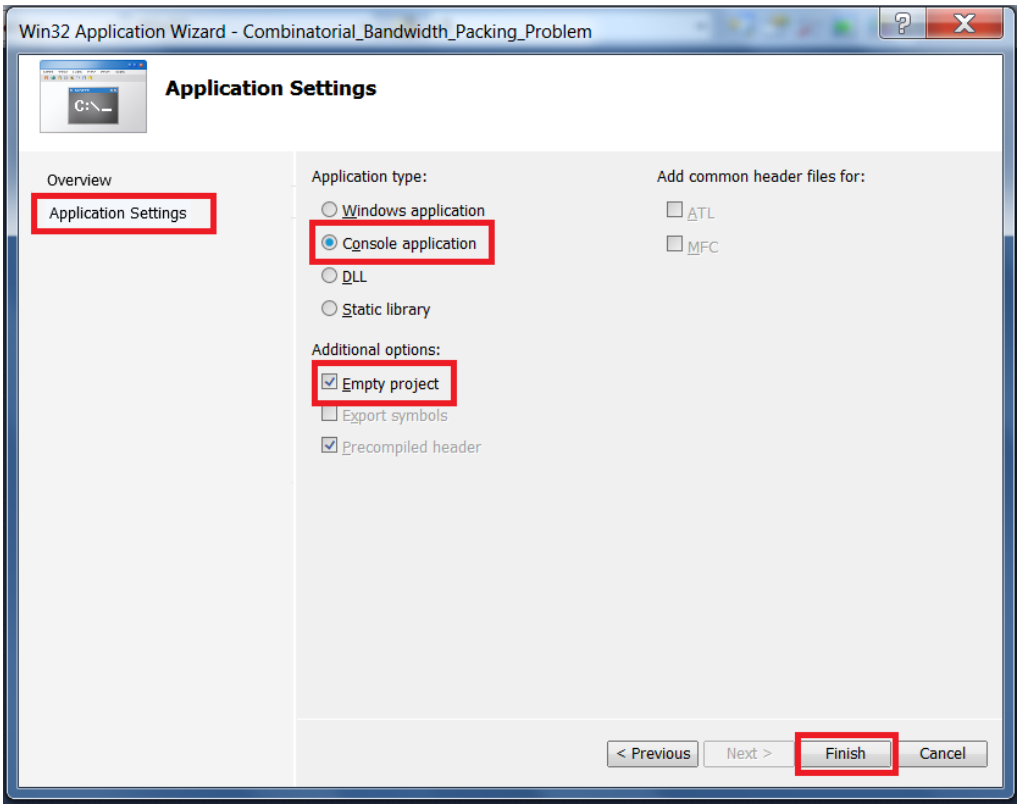
2. Install **Windows SDK 7.1**
    a. Run **winsdk_web.exe** file to setup Windows SDK 7.1 version. Make sure you are connected to the internet.
3. Install cplex 64-bit version
    a. Run the file **cplex_studio124.win-x86-64.exe**

    Note: If the installation of any of these fails. Try the following:

    - On Windows 8, run the applications in Windows 7 compatibility mode. Right-click on the setup file**, Goto Properties -> Compatibility tab**. In compatibility mode section, choose Windows 7.
    - Run the setup with **administrator privileges**.
    - If the above two fail for CPLEX installation, then try installing CPLEX in a different folder **(i.e NOT C:/ drive**)
4. Creating the Visual C++ project
    a. First create a new project. **File->New Project**
    b. In the new project wizard, select **Win32 Console application**, give a name to the project and click on **OK**.



c. In the next dialog box, select Application Settings; Application type = Console application, Additional options = **Empty project**. Click on **Finish**.

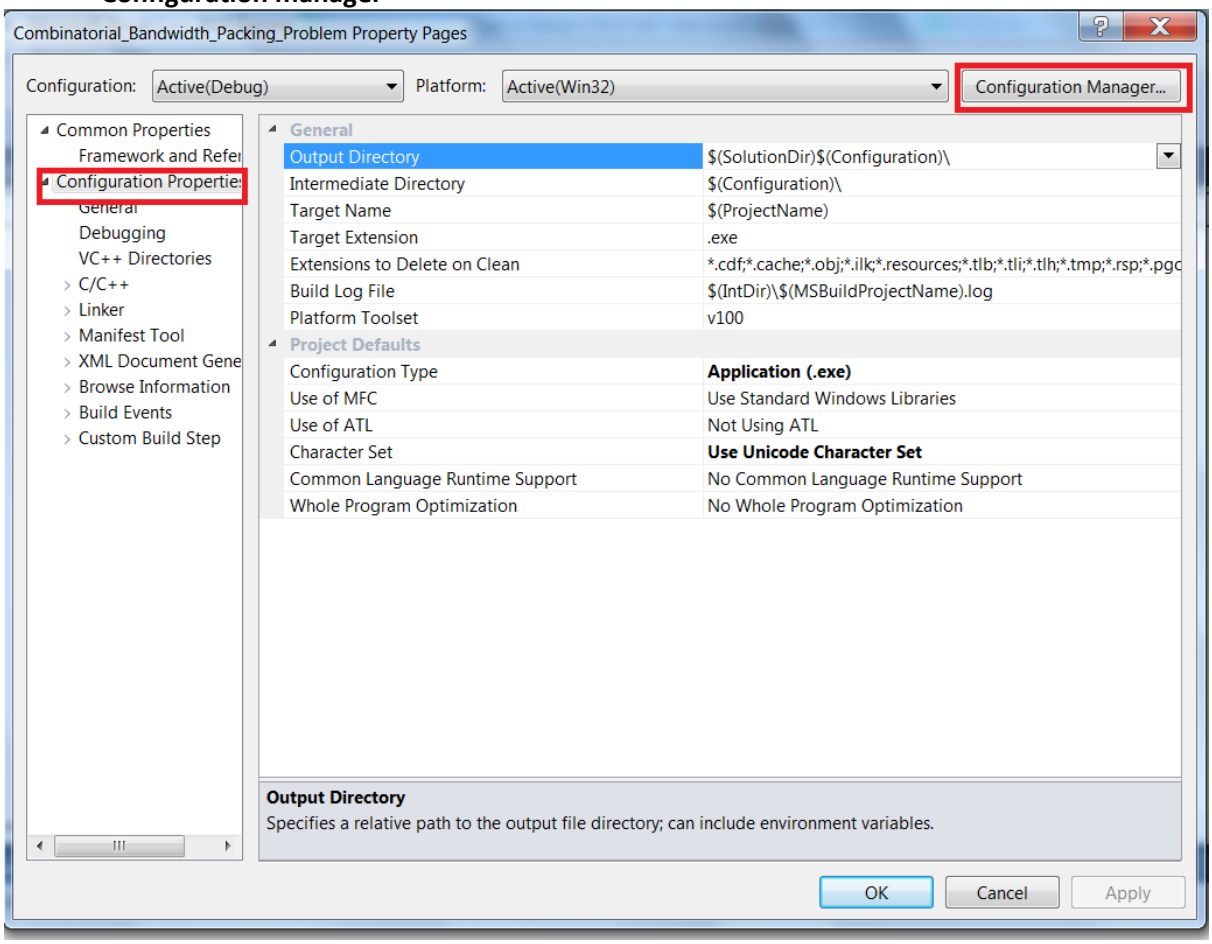


d. From the **Solution-Explorer** window on the left, Right-click on **Source->Add-> New Item…**. Select **C++ File (.cpp)** and give a name. Write a sample code with cplex commands. After setting up cplex you may run the code to verify if the setup is successful. A sample code is provided here which you may simply copy-paste :

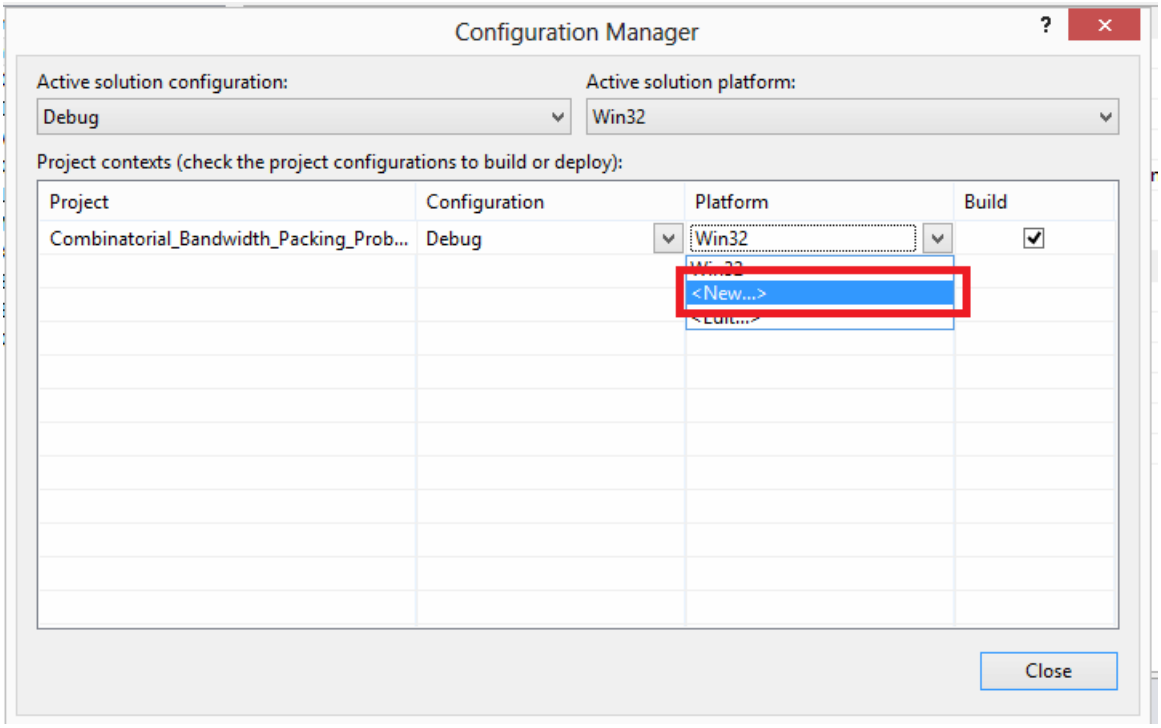
```
#include<stdio.h>
#include<conio.h>
#include<iostream>
#include<fstream>
#include<iosfwd>
#include<string>
#include <deque>
#include <sstream>
```

```
#include <time.h>
//#include <iomanip.h>
#include <stdlib.h>
#include <vector>//for vectors
#include <math.h>
#include <ilcplex/ilocplex.h>
#include <ilconcert/ilosys.h>

ILOSTLBEGIN

typedef IloArray<IloNumArray> Num2DMatrix;
typedef IloArray<Num2DMatrix> Num3DMatrix;//3D array of Num
typedef IloArray<IloNumVarArray> NumVar2DMatrix; // 2D array of
NumVar
typedef IloArray<NumVar2DMatrix> NumVar3DMatrix;//3D array of Var

int main(IloInt argc, char **argv) {

	IloEnv env;

	cout << "Hello World!"<<endl;
}
```

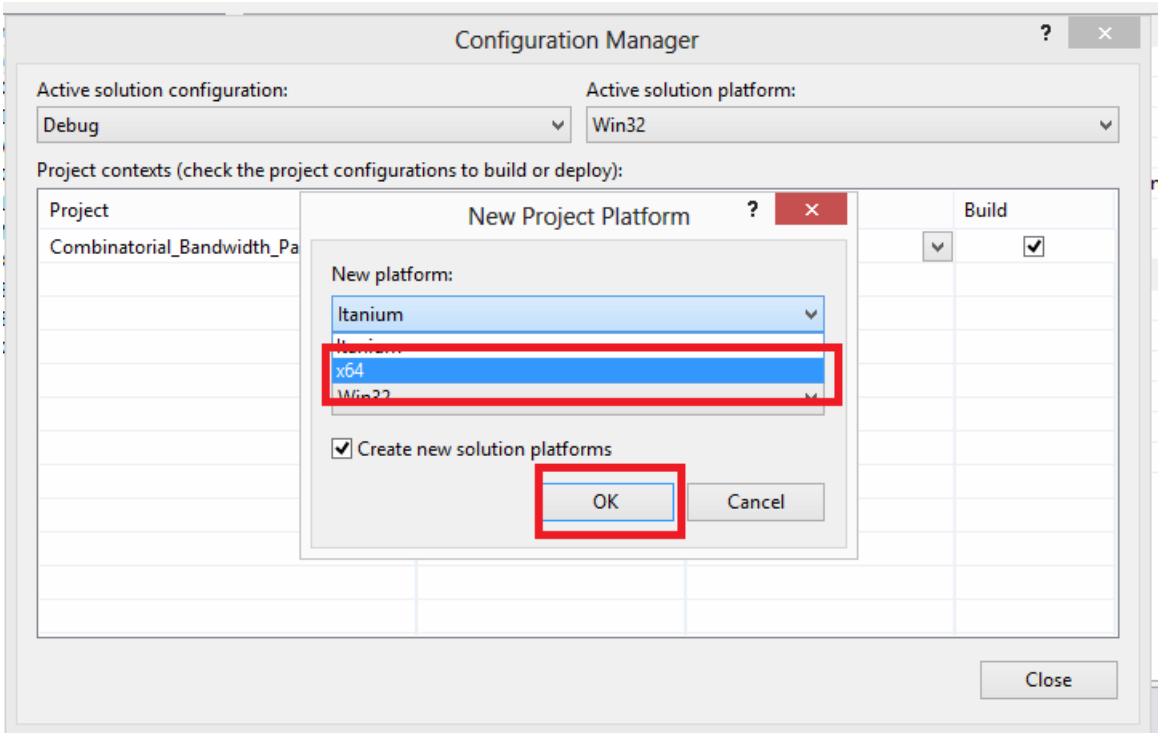
5. Setting up 64-bit compiler on Visual C++ :
   a. Goto **Project->Properties**
   b. Make sure the **Configuration Properties** node is selected on the left hand side. Then click on **Configuration manager**



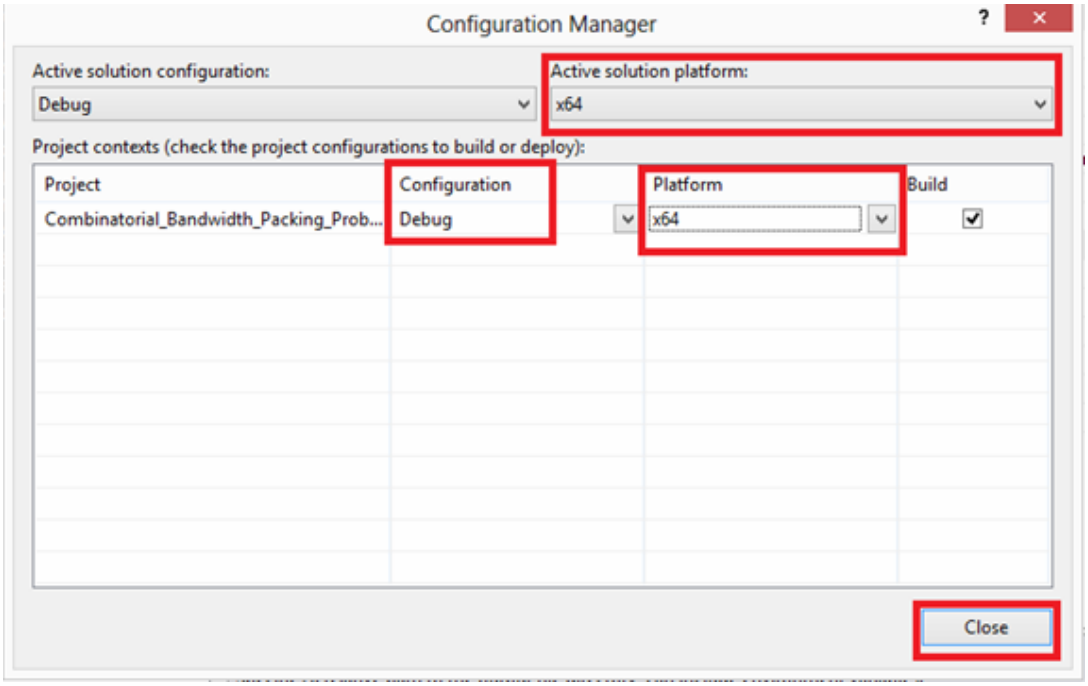
   c. In the configuration manager dialog box create a **new platform** as shown below :



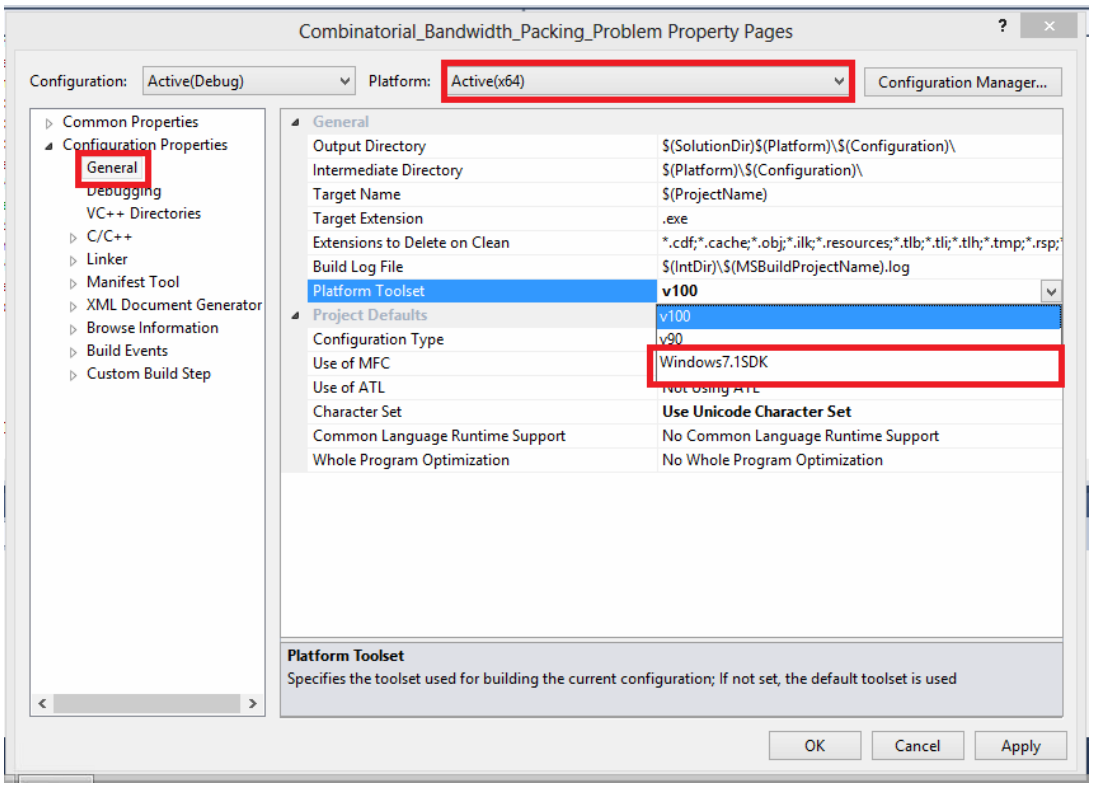
d. Select **x64** as the new platform. Leave the **Copy the settings from** as it is. Click **OK**.



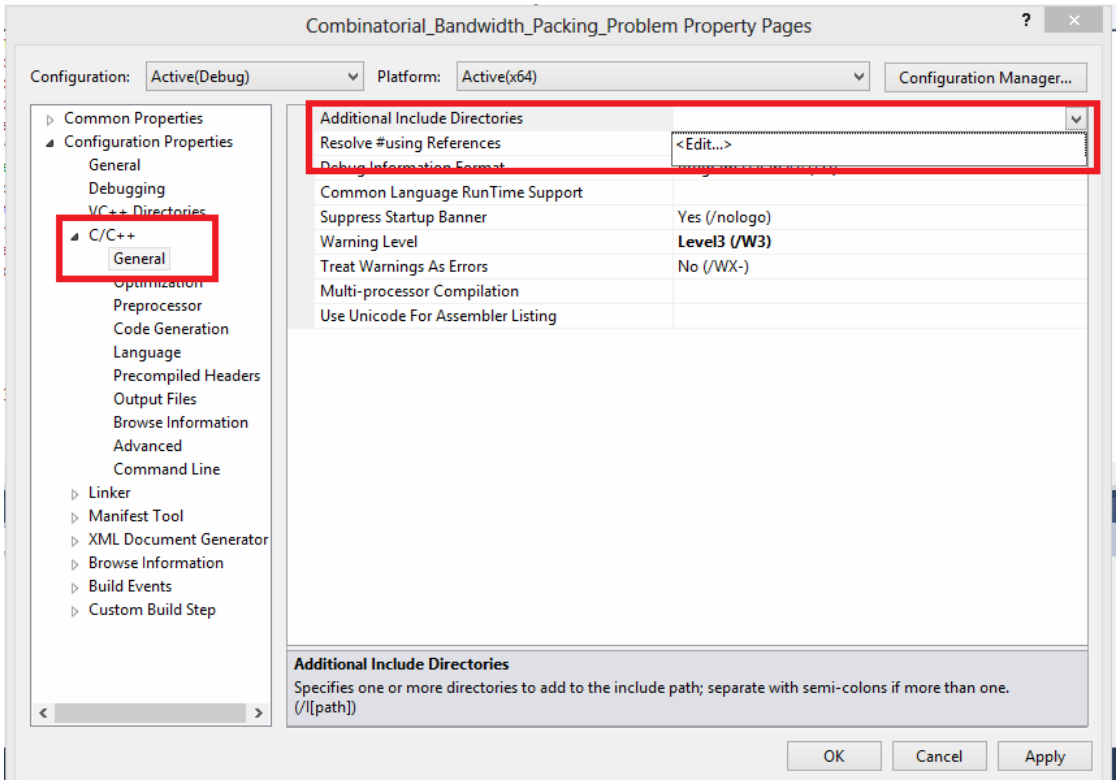
e. You should now see a dialog box like the one below. Click **Close** :



f. In the **Configuration Properties -> General node**, change the **Platform Toolset** to **Windows7.1SDK**

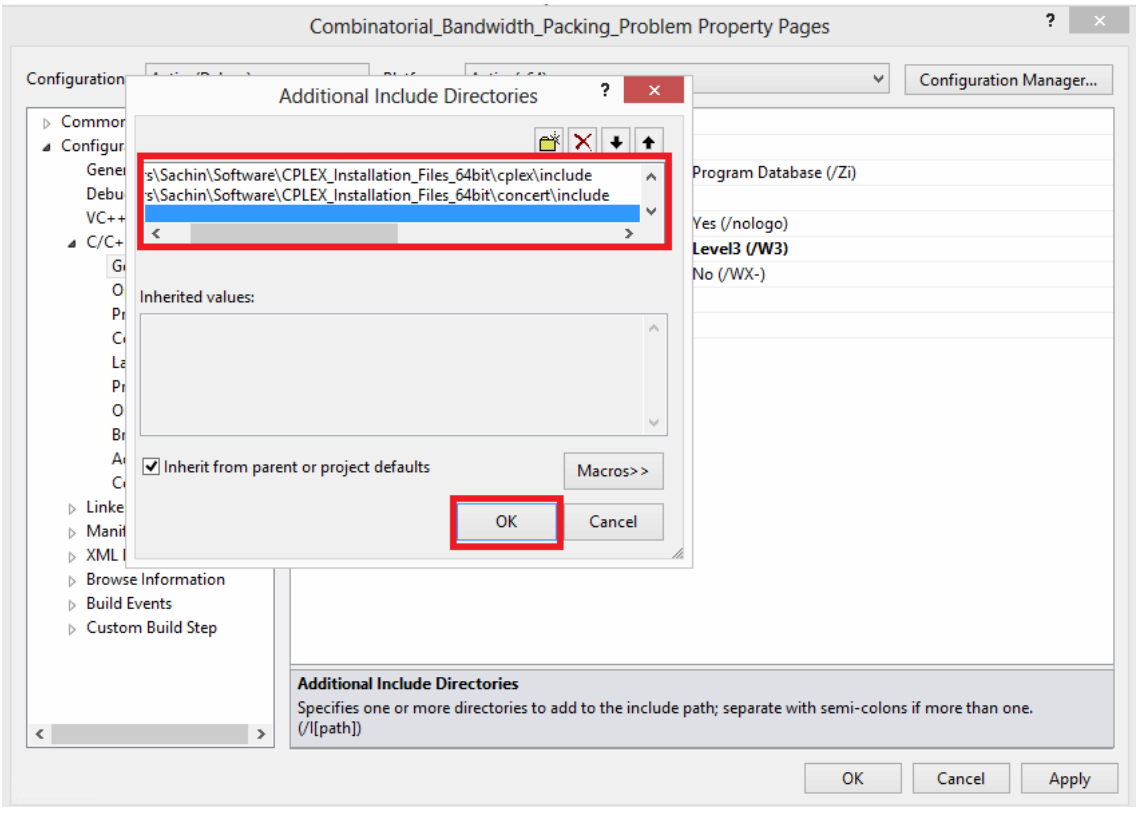


6. Steps to setup and link CPLEX 64-bit version :
   a. Before beginning, remember the path to the folder where CPLEX is installed. On my laptop it is **C:\Users\Sachin\Software\CPLEX_Installation_Files_64bit**.
   b. Goto **Project->Properties**.
   c. In **C/C++ -> General** node. Select **Additional Include Directories** and click on **<Edit…>**



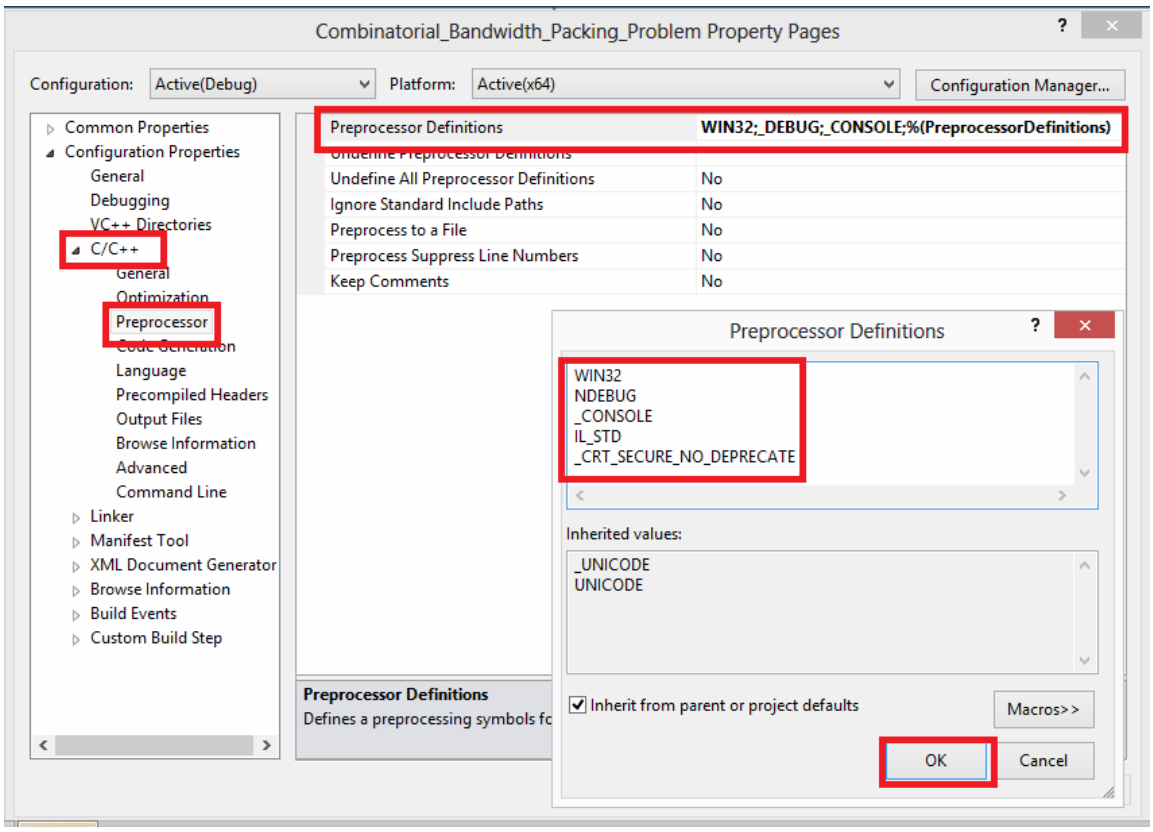
d. In the dialog box, add the path to the following two folders (from the cplex installation directory) and click on OK:

C:\Users\Sachin\Software\CPLEX_Installation_Files_64bit\cplex\include
C:\Users\Sachin\Software\CPLEX_Installation_Files_64bit\concert\include

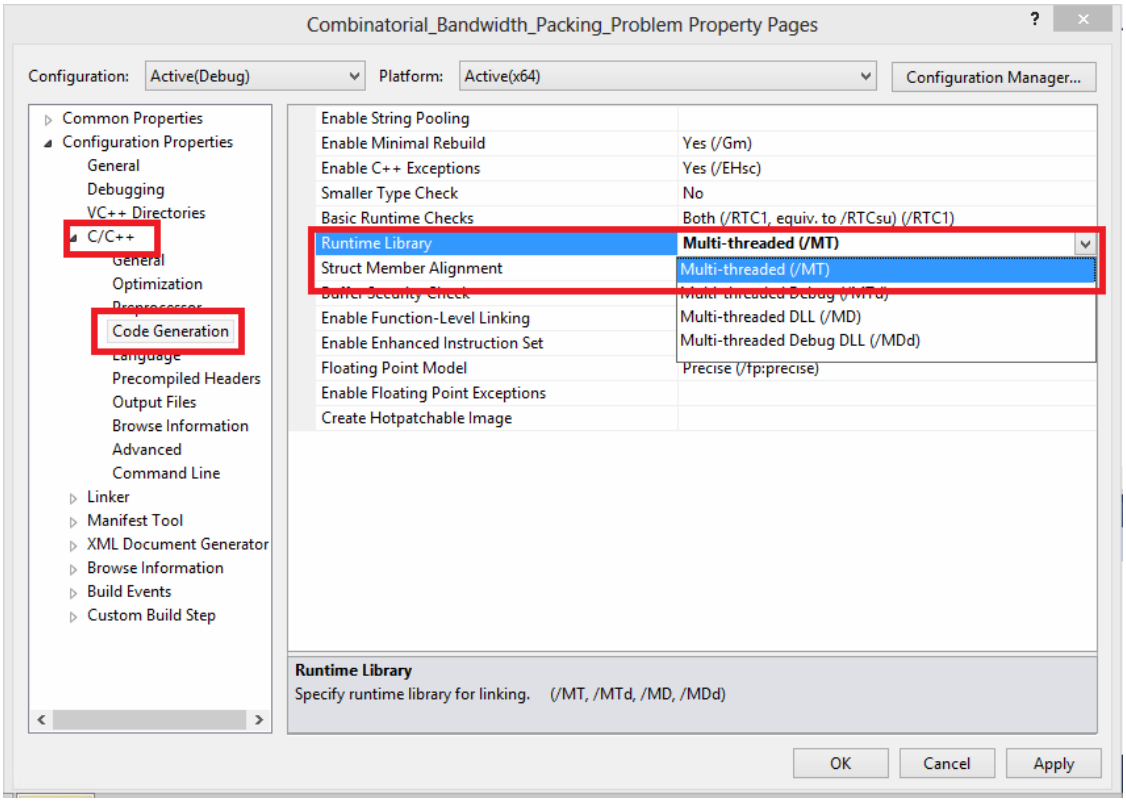


e. In **C/C++ -> Preprocessor** node, select **Preprocessor definitions** and click on **<Edit...>**. Paste the following in the dialog box and click on OK.

WIN32
NDEBUG
_CONSOLE
IL_STD
_CRT_SECURE_NO_DEPRECATE

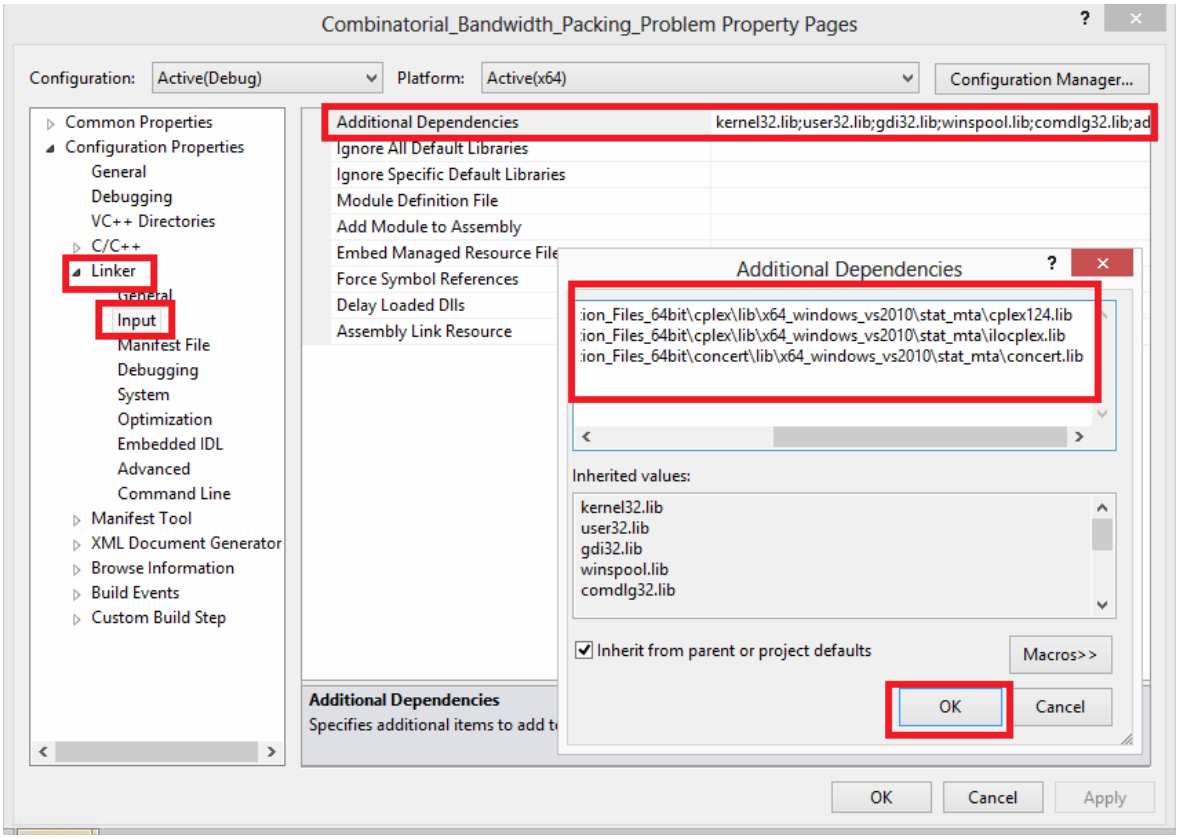


f. In the **C/C++ -> Code Generation** node change the **Runtime Library** to **Multi-threaded(/MT)**



g. In the **Linker -> Input** node, select **Additional Dependencies** and click on **<Edit…>**. Paste the path (from the CPLEX installation directory) to the following three library files **(.lib)** in the resulting dialog box. Click on **OK**

C:\Users\Sachin\Software\CPLEX_Installation_Files_64bit\cplex\lib\x64_windows_vs2010\stat_mta\cplex124.lib
C:\Users\Sachin\Software\CPLEX_Installation_Files_64bit\cplex\lib\x64_windows_vs2010\stat_mta\ilocplex.lib
C:\Users\Sachin\Software\CPLEX_Installation_Files_64bit\concert\lib\x64_windows_vs2010\stat_mta\concert.lib



h. We are all set now. Click on **Apply** and click on **OK**.

7. Run the sample code (**Debug -> Build Solution**) to check if the setup is successful.